

What is claimed is:

1. A process comprising:

determining in an internal combustion engine fuel system including a fuel injector and an injector booster operatively coupled to the injector to selectably drive at least in part the injector an electrical characteristic of the booster; and

diagnosing an error or failure of the system based at least in part upon said determining.
2. The process of claim 1 further comprising:

indicating signaling or warning of the error or failure based upon said determining or diagnosing.
3. The process of claim 1 further comprising:

discharging the booster effective to drive at least in part the injector.
4. The process of claim 1 wherein said determining comprises measuring a voltage of the booster and comparing the measurement and a threshold.
5. The process of claim 1 further comprising second determining an electrical characteristic of the booster.

6. The process of claim 5 wherein said diagnosing error or failure is further based upon said second determining.
7. The process of claim 1 further comprising:
further determining compliance of the booster voltage with a threshold; and
disabling the injector based upon the further determining.
8. A method for use with an injection system having a fuel injector and a booster capacitor, the method comprising:
discharging the booster capacitor;
sensing a characteristic of the booster capacitor; and
determining a system error or failure based at least in part upon said sensing.
9. The method of claim 8 further comprising analyzing the sensed characteristic and a first value.
10. The method of claim 9 wherein said determining is based at least in part upon said analyzing.
11. The method of claim 8 further comprising recharging the booster capacitor.
12. The method of claim 8 wherein the sensed characteristic is voltage.

13. The method of claim 9 further comprising:
repeating said sensing and said analyzing; and
wherein said determining an error or failure is further based upon the repeated analysis.
14. The method of claim 9 further comprising:
comparing the sensed characteristic and a second value; and
disabling the injector based upon said comparing.
15. The method of claim 11 wherein the sensing occurs after the said recharging has substantially completed.
16. The method of claim 11 wherein the measuring occurs after said recharging and before a second discharging.
17. A method comprising:
providing an internal combustion engine having a fuel injector and a booster, the booster operable to discharge to the injector and recharge after discharging, the booster having a voltage varying with the discharging and recharging;
first determining whether the voltage has met or exceeded a first value;
storing or indicating an error or failure of the system based upon the first determining;
second determining whether the voltage has met or exceeded a second value; and

disabling the fuel injector based upon said second determining.

18. The method of claim 17 wherein said first determining occurs before said second determining.

19. The method of claim 17 wherein said first determining occurs after said second determining.

20. The method of claim 17 wherein said first determining and said second determining are at least partially contemporaneous.

21. The method of claim 17 wherein the voltage of said first determining and the voltage of said second determining are measured at different times.

22. A system comprising:

- an injector including a fluid pathway;
- a control selectably regulating or controlling flow in or through the pathway;
- a booster in operative communication with the control, the booster selectably amplifying the operation of the injector, the booster having at least one characteristic; and
- means for determining or diagnosing one of system error and failure based at least in part on the booster characteristic.

23. The system of claim 22 wherein the injector is an internal combustion engine fuel injector and the control includes or is in operative communication with a solenoid armature.

24. The system of claim 22 further comprising means for storing or displaying information of error or failure.

25. The system of claim 22 further comprising means for disabling or delaying operation of the injector.

26. A combination comprising:
an injector;
a booster operatively coupled to the injector, the booster selectably altering operation of the injector;
a detector in operative communication with the booster and adapted to receive or transmit information of the booster; and
logic in operative communication with the detector, the logic adapted to process the information or act based on the information.

27. The combination of claim 26 wherein the detector resides at least in part in software.

28. The combination of claim 26 wherein the logic resides at least in part in software.

29. The combination of claim 26 where the detector and the logic reside at least in part in hardware.

30. The combination of claim 26 wherein the injector is a fuel injector the booster includes a charge storing element and the information relates to electrical characteristics or properties of the element.